

type is provided which forms a contact area for the well of second conductivity type.

Sub E1
7. (New) The semiconductor device of Claim 7, wherein the at least two gated diodes are provided on the right-hand end of the longitudinal zone and comprises the insulated gate and the highly doped second conductivity type surface zone which partly overlaps the well of the second conductivity type.

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8. (New) The semiconductor device of Claim 7, wherein the at least two gated diodes are arranged as a MOS transistor having a further zone of the second conductivity type.

Sub E2
9. (New) The semiconductor device of Claim 7, wherein the cathode of the SCR is provided along the part of the periphery of the well of the second conductivity type that is free from the at least two gates. --

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 14, 2001. Claims 1-9 are now pending in this application. Claim 1 is the independent claim. Favorable reconsideration is respectfully requested.

On the merits, the Office Action rejected Claims 1-5 under 35 USC § 103(a) as being unpatentable over Ker et al. (U.S. Patent No. 5,572,394; hereinafter "Ker"). Applicants respectfully submit that the pending claims are patentable over the cited art for at least the following reasons.

Claim 1 recites, in pertinent part: "a semiconductor device" containing a "protection means for protection against electrostatic discharge (ESD), the means being a compound element of an SCR and at least two gated diodes, the protection means being provided in a surface area of a first conductivity type having a single well of a second, opposite, conductivity type, wherein a surface zone of the first conductivity type forms a first anode and cathode area of the SCR element, the surface area has a surface zone of the second conductivity type, further denoted as first zone, situated remote from the well and forming a second anode and cathode area of the SCR element, and the at least two gated diodes contain a gate insulated from the surface of the semiconductor body and a highly-doped second conductivity type surface zone aligned to this gate further denoted as second zone, which aligned surface zone partly overlaps the well of the second conductivity type, characterized in that the said second zone stretches out only along a part of the periphery of the well, whereas the first zone is provided

along at least another part of this periphery of the well which is free from the said second zone [.]”

Ker fails to recite or suggest the protection means being a compound element of an SCR and at least two gated diodes, as recited in Claim 1. Rather, Ker only recites a single diode per protection means (see, e.g., Fig. 9). Consequently, Claim 1 is believed patentable over Ker for at least this reason.

Claims 2-5 in this application are each dependent from Claim 1 discussed above and are therefore believed patentable for the same reasons. Since the dependent claims are also deemed to define an additional aspect of the invention, however, individual consideration or reconsideration, as the case may be, of the patentability of them on their own merits is respectfully requested.

In view of the foregoing, it is respectfully submitted that the currently-pending claims clearly define statutory subject matter. Accordingly, allowance of the currently-pending claims is now respectfully submitted to be justified, and favorable consideration is earnestly solicited.

Respectfully submitted,

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APPENDIX A
MARKED-UP CLAIMS

1. (Twice Amended) A semiconductor device having a semiconductor body which on a surface comprises an integrated circuit containing protection means for protection against electrostatic discharge (ESD), the means being a compound element of an SCR and ~~a~~ at least two gated diode ~~diodes~~, the protection means being provided in a surface area of a first conductivity type having a single well of a second, opposite, conductivity type,

wherein a surface zone of the first conductivity type forms a first anode and cathode area of the SCR element,

the surface area has a surface zone of the second conductivity type, further denoted as first zone, situated remote from the well and forming a second anode and cathode area of the SCR element, and

the at least two gated diode ~~containing diodes~~ contain a gate insulated from the surface of the semiconductor body and a highly-doped second conductivity type surface zone aligned to this gate further denoted as second zone, which aligned surface zone partly overlaps the well of the second conductivity type, characterized in that the said second zone stretches out only along a part of the periphery of the well, whereas the first

zone is provided along at least another part of this periphery of the well which is free from the said second zone.

2. (Amended) A semiconductor device as claimed in claim 1, characterized in that the gate of the at least two gated diode diodes substantially stretches out only along that part of the periphery of the well along which also the said second zone of the second conductivity type stretches out.

3. (Amended) A semiconductor device as claimed in claim 2, characterized in that the at least two gated diode is diodes are arranged in the form of a MOS transistor which has a further surface zone of the second conductivity type, deposited in the surface area of the first conductivity type, the said second zone forming one of the source/drain zones of the transistor and the said further surface zone forming the other one of the source/drain zones of the transistor, the said first zone of the second conductivity type being situated at a shorter lateral distance from the surface zone of the first conductivity type provided in the well than the said further surface zone.